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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,140	04/23/2001	Nobuo Tsuchiya	35.C15319	1614

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EXAMINER

SINGH, DALZID E

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 07/13/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/839,140

Applicant(s)

TSUCHIYA, NOBUO

Examiner

Dalzid Singh

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 1-12 is/are allowed.
6) ☒ Claim(s) 13 and 22 is/are rejected.
7) ☒ Claim(s) 14-22 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13 and 22/13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka et al (US Patent No. 5,479,288).

Regarding claim 13, Ishizuka et al disclose light transmission module including optical signal receiver, as shown in Fig. 5, comprising:

an opto-electric converter (213) for converting an optical signal transmitted from a remotely opposed transmitter into an electric signal (see col. 9, lines 51-53; since the signal is received by the photodiode, therefore it would have been obvious that there exist a remotely opposed transmitter to transmit the optical signal);

a reproduction circuit (205) for reproducing a data signal from an output of said opto-electric converter (see col. 10, lines 38-42); and

an alarm circuit (222) for detecting an abnormal state of optical signal transmission, the alarm circuit being adapted for suspending the data signal, when it detects the abnormal state (see col. 10, lines 2-6, col. 12, lines 41-51 and Fig. 10; Ishizuka et al teaches suspension (or stopping) the data signal of the receiving circuit when signal strength falls to or below a selected threshold, it is well known to indicate the signal to be "abnormal" when it falls or below a threshold value).

Ishizuka et al disclose optical transmission system as shown in Fig. 5, and differ from the claimed invention in that Ishizuka et al does not specifically disclose control circuit suspending the data signal that is to be outputted from said reproduction circuit, when it detect abnormal state while the data signal is outputted from said reproduction circuit. However, since the functionality of the alarm circuit is to suspend or stop data signal when "abnormal" signal is detected, therefore if it is not inherent it would have been obvious to indicate the alarm circuit as a control circuit. Furthermore, in col. 10, lines 2-6, Ishizuka et al disclose suspension or stop data of the receiving circuit when signal strength falls to or below a selected threshold level. The receiving circuit comprises of reproduction circuit (see col. 9, lines 51-67 to col. 10, lines 1-12). As shown in Fig. 10, output of reproduction circuit (230-233) coupled to output buffers (223 and 224) is control by alarm circuit (222) which is coupled to shut-down circuit (268) to control signal output of the output buffers (223 and 224). Therefore, if it is not inherent, it would have been obvious that the alarm circuit suspend or stop the data signal coming out of the reproduction circuit when it detects "abnormal" states of the signal.

In optical communication system it is well known that when signal travel along transmission lines or free space, signal level degrades. On the receiving side, if the received signal is to be re-transmitted, the received signal level has to be within a desired value. When quality or level of the received signal falls below a desired value, for example, because of line breaks or bad atmospheric condition, it is desirable to suspend or stop re-transmission of the received signal. One of ordinary skill in the art

would have been motivated to do this in order to avoid transmission of error signal and reduce bit error rate.

Regarding claim 22/13, Ishizuka et al disclose optical transmission system including optical signal receiver (see col. 9, lines 51-53) adapted to received optical signal and differ from the claimed invention in that Ishizuka et al do not specifically disclose a transmitter which is remotely opposed to the receiver. However, since the receiver circuit received optical signal, therefore if it is not inherent, it would have been obvious that there is remotely opposed transmitter to transmit the optical signal. One of ordinary skill in the art would have been motivated to provide such transmitter in order to transfer data signal from remote locations.

The recitation "space transmission" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Allowable Subject Matter

3. Claims 1-12 are allowed.
4. The following is an examiner's statement of reasons for allowance:

Claim 1 is allowable because the invention described in patent number 6,285,481 to Ishizuka et al does not disclose or fairly suggest communication system comprising:

a fixed signal generation circuit for generating a fixed signal having a logic level fixed to 0 or 1;

a switch for selectively outputting either the data signal reproduced by reproduction circuit or the fixed signal generated by said fixed signal generation circuit; and

a control circuit for detecting an abnormal state of optical signal transmission and controlling said switch, said control circuit being adapted to output the fixed signal from said switch, when it detects the abnormal state while outputting the data signal from said switch.

Claims 22/(14-21) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Palmer (US Patent No. 6,285,481) is cited to show free-space laser communications error control system.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is 703-306-5619. The examiner can normally be reached on Mon-Fri 8am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS
July 08, 2004

David Singh